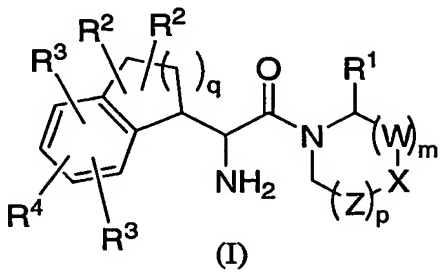
WHAT IS CLAIMED IS:

1. A compound of the formula I:



(I)

or a pharmaceutically acceptable salt thereof; wherein
each n is independently 0, 1, or 2;
m and p are each independently 0 or 1;
q is 1 or 2;

X is CH_2, S, SO, SO_2, CHF, or CF_2;
W and Z are each independently CH_2, CHF, or CF_2;
R^1 is hydrogen or cyano;

each R^2 is independently selected from the group consisting of hydrogen, halogen, C_{1-4} alkyl, C_{1-4} alkoxy, trifluoromethyl, trifluoromethoxy, and hydroxy;

each R^3 is independently selected from the group consisting of hydrogen, halogen, C_{1-4} alkyl, C_{1-4} alkoxy, trifluoromethyl, trifluoromethoxy, and hydroxy;

R^4 is hydrogen, halogen, aryl, heteroaryl, or heterocyclyl, wherein aryl, heteroaryl, and heterocyclyl are unsubstituted or substituted with one to five R^5 substituents;

each R^5 is independently selected from the group consisting of
halogen,
cyano,
oxo,
hydroxy,
C_{1-6} alkyl, wherein alkyl is unsubstituted or substituted with one to five halogens,
C_{1-6} alkoxy, wherein alkoxy is unsubstituted or substituted with one to five halogens,

$(CH_2)_n$-NR^6R^7,
$(CH_2)_n$-$CONR^6R^7$,
$(CH_2)_n$-$OCONR^6R^7$,
$(CH_2)_n$-$SO_2NR^6R^7$,
$(CH_2)_n$-SO_2R^9,
$(CH_2)_n$-$NR^8SO_2R^9$,
$(CH_2)_n$-$NR^8CONR^6R^7$,
$(CH_2)_n$-NR^8COR^8,
$(CH_2)_n$-$NR^8CO_2R^9$,
$(CH_2)_n$-COOH,
$(CH_2)_n$-$COOC_{1-6}$ alkyl,
$(CH_2)_n$-aryl, wherein aryl is unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, CO_2H, C_{1-6} alkyloxycarbonyl, C_{1-6} alkyl, C_{3-6} cycloalkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens,
$(CH_2)_n$-heteroaryl, wherein heteroaryl is unsubstituted or substituted with one to three substituents independently selected from hydroxy, halogen, CO_2H, C_{1-6} alkyloxycarbonyl, C_{1-6} alkyl, C_{3-6} cycloalkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens,
$(CH_2)_n$-heterocyclyl, wherein heterocyclyl is unsubstituted or substituted with one to three substituents independently selected from oxo, hydroxy, halogen, CO_2H, C_{1-6} alkyloxycarbonyl, C_{1-6} alkyl, C_{3-6} cycloalkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens,
$(CH_2)_n$-C_{3-6} cycloalkyl, wherein cycloalkyl is unsubstituted or substituted with one to three substituents independently selected from halogen, hydroxy, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens,
wherein any methylene (CH_2) carbon atom in R^5 is unsubstituted or substituted with one to two groups independently selected from halogen, hydroxy, and C_{1-4} alkyl unsubstituted or substituted with one to five halogens;

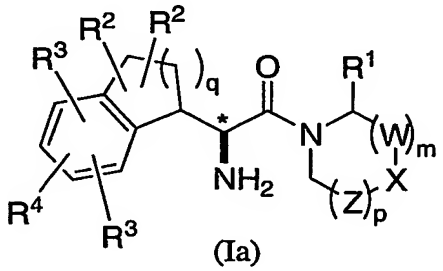
R^6 and R^7 are each independently selected from the group consisting of hydrogen, tetrazolyl, thiazolyl, $(CH_2)_n$-phenyl, $(CH_2)_n$-C_{3-6} cycloalkyl, and C_{1-6} alkyl, wherein alkyl is unsubstituted or substituted with one to five substituents independently selected from halogen and hydroxy and wherein phenyl and cycloalkyl are unsubstituted or substituted with one to five

substituents independently selected from halogen, hydroxy, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens;
or R^6 and R^7 together with the nitrogen atom to which they are attached form a heterocyclic ring selected from azetidine, pyrrolidine, piperidine, piperazine, and morpholine wherein said heterocyclic ring is unsubstituted or substituted with one to three substituents independently selected from halogen, hydroxy, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens; and

each R^9 is independently selected from the group consisting of tetrazolyl, thiazolyl, $(CH_2)_n$-phenyl, $(CH_2)_n$-C_{3-6} cycloalkyl, and C_{1-6} alkyl, wherein alkyl is unsubstituted or substituted with one to five halogens and wherein phenyl and cycloalkyl are unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens, and wherein any methylene (CH_2) carbon atom in R^9 is unsubstituted or substituted with one to two groups independently selected from halogen, hydroxy, and C_{1-4} alkyl unsubstituted or substituted with one to five halogens; and

each R^8 is hydrogen or R^9.

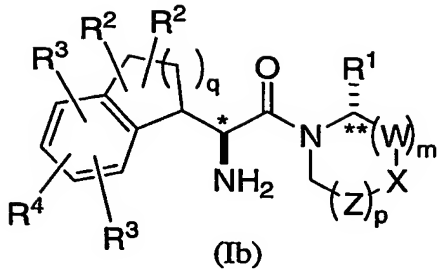
2. The compound of Claim 1 wherein the carbon atom marked with an * has the stereochemical configuration as depicted in formula Ia:



(Ia)

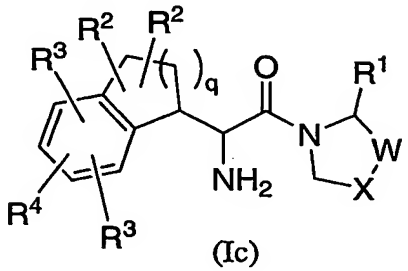
wherein R^2 and R^3 are each independently hydrogen or fluorine; and
W, X, Z, m, p, q, R^1, and R^4 are as defined in Claim 1.

3. The compound of Claim 2 wherein the carbon atom marked with an ** has the stereochemical configuration as depicted in formula Ib:



(Ib)

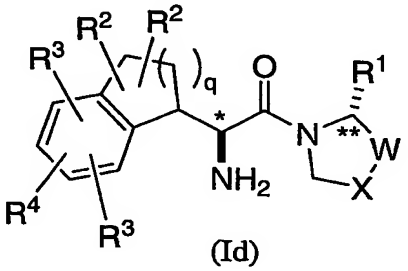
4. The compound of Claim 1 wherein m is 1 and p is 0 as depicted in formula Ic:



(Ic)

wherein R^2 and R^3 are independently hydrogen or fluorine, and
W, X, q, R^1, and R^4 are as defined in Claim 1.

5. The compound of Claim 4 wherein the carbon atom marked with an * and the carbon atom marked with an ** have the stereochemical configurations as depicted in the formula Id:

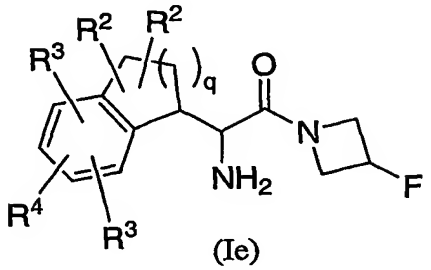


(Id)

wherein R^2 and R^3 are each independently hydrogen or fluorine, and
W, X, q, R^1, and R^4 are as defined in Claim 1.

6. The compound of Claim 5 wherein R^1 is hydrogen; W is CH_2; and X is CH_2, CHF or CF_2.

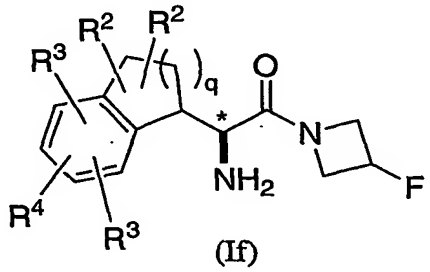
7. The compound of Claim 1 wherein R^1 is hydrogen and m and p are 0 as depicted in the formula Ie:



(Ie)

wherein R^2 and R^3 are each independently hydrogen or fluorine, and q and R^4 are as defined in Claim 1.

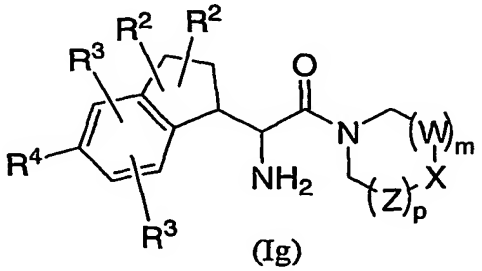
8. The compound of Claim 7 wherein the carbon atom marked with an * has the stereochemical configuration as depicted in the formula If:



(If)

wherein R^2 and R^3 are each independently hydrogen or fluorine, and q and R^4 are as defined in Claim 1.

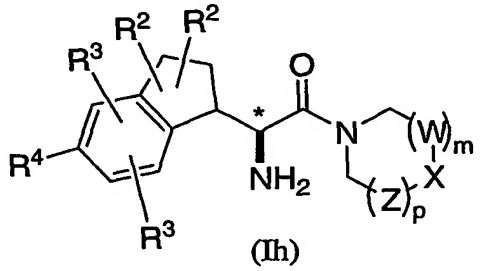
9. The compound of Claim 1 of structural formula Ig:



(Ig)

wherein q is 1; R^2 and R^3 are each independently hydrogen or fluorine; and W, X, Z, m, p, and R^4 are as defined in Claim 1.

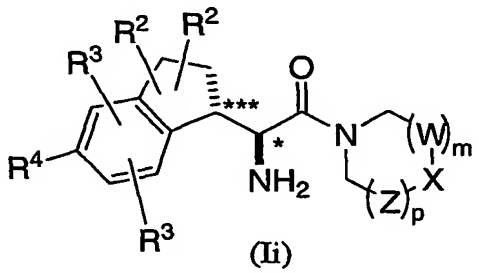
10. The compound of Claim 9 wherein the carbon atom marked with an * has the stereochemical configuration as depicted in the formula Ih:



(Ih)

wherein R^2 and R^3 are each independently hydrogen or fluorine, and W, X, Z, m, p, and R^4 are as defined in Claim 1.

11. The compound of Claim 9 wherein the carbon atom marked with an * and the carbon atom marked with an *** have the stereochemical configurations as depicted in the formula Ii:



(Ii)

wherein R^2 and R^3 are each independently hydrogen or fluorine, and W, X, Z, m, p, and R^4 are as defined in Claim 1.

12. The compound of Claim 11 wherein X is CH_2, S, CHF, or CF_2;
W and Z are each independently CH_2, CHF, or CF_2;
R^4 is hydrogen, halogen, phenyl, heteroaryl, or heterocyclyl, wherein phenyl, heteroaryl, and heterocyclyl are unsubstituted or substituted with one to three R^5 substituents; and
each R^5 is independently selected from the group consisting of:

halogen,
cyano,
oxo,
hydroxy,

C_{1-6} alkyl, wherein alkyl is unsubstituted or substituted with one to five halogens,
C_{1-6} alkoxy, wherein alkoxy is unsubstituted or substituted with one to five halogens,
NR^6R^7,
$CONR^6R^7$,
$OCONR^6R^7$,
$SO_2NR^6R^7$,
SO_2R^9,
$NR^8SO_2R^9$,
$NR^8CONR^6R^7$,
NR^8COR^8,
$NR^8CO_2R^9$,
COOH,
$COOC_{1-6}$ alkyl,
aryl, wherein aryl is unsubstituted or substituted with one to five substituents independently selected from halogen, hydroxy, CO_2H, C_{1-6} alkyloxycarbonyl, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens,
heteroaryl, wherein heteroaryl is unsubstituted or substituted with one to three substituents independently selected from hydroxy, halogen, CO_2H, C_{1-6} alkyloxycarbonyl, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens,
heterocyclyl, wherein heterocyclyl is unsubstituted or substituted with one to three substituents independently selected from oxo, hydroxy, halogen, CO_2H, C_{1-6} alkyloxycarbonyl, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens, and
$(CH_2)_n$-C_{3-6} cycloalkyl, wherein cycloalkyl is unsubstituted or substituted with one to three substituents independently selected from halogen, hydroxy, C_{1-6} alkyl, and C_{1-6} alkoxy, wherein alkyl and alkoxy are unsubstituted or substituted with one to five halogens.

13. The compound of Claim 12 wherein each R^5 is independently selected from the group consisting of:
halogen,
oxo,
C_{1-6} alkyl, wherein alkyl is unsubstituted or substituted with one to five halogens,

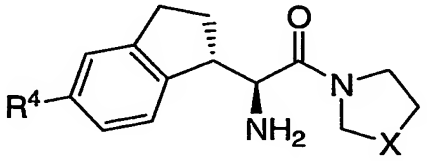
C_{1-6} alkoxy, wherein alkoxy is unsubstituted or substituted with one to five halogens, and

C_{3-6} cycloalkyl.

14. The compound of Claim 12 wherein R^4 is selected from the group consisting of:

hydrogen,
bromo,
4-fluorophenyl,
2-methoxyphenyl,
1-methylpiperidin-2-on-5-yl,
1-methylpyridin-2(1H)-on-5-yl,
[1,2,4]triazolo[4,3-*a*]pyridin-6-yl,
3-(cyclopropyl)[1,2,4]triazolo[4,3-*a*]pyridin-6-yl,
[1,2,4]triazolo[1,5-*a*]pyridin-6-yl,
[1,2,4]triazolo[1,5-*a*]pyridin-7-yl,
[1,2,4]triazolo[1,5-*a*]pyrazin-5-yl,
2-(trifluoromethyl)[1,2,4]triazolo[1,5-*a*]pyrazin-5-yl, and
1-methylpyrimidin-2(1*H*)-on-5-yl.

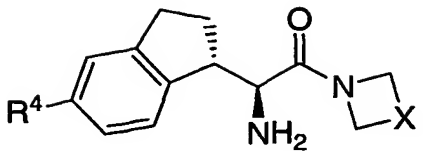
15. The compound of Claim 14 of the structural formula selected from the group consisting of:



R^4	X
H	(*S*)-CHF
Br	(*S*)-CHF
4-F-Ph	(*S*)-CHF
2-OMe-Ph	(*S*)-CHF

1-methylpyridin-2(1*H*)-on-5-yl	(*S*)-CHF
1-methyl-piperidin-2-on-5-yl	(*S*)-CHF
[1,2,4]triazolo[1,5-*a*]pyridin-6-yl	(*S*)-CHF
[1,2,4]triazolo[4,3-*a*]pyridin-6-yl	(*S*)-CHF
3-Cyclopropyl[1,2,4]triazolo[4,3-*a*]pyridin-6-yl	(*S*)-CHF
Br	CF_2
2-(trifluoromethyl)-[1,2,4]triazolo[1,5-*a*]pyrazin-5-yl	(*S*)-CHF
[1,2,4]triazolo[1,5-*a*]pyrazin-5-yl	(*S*)-CHF
1-methylpyridin-2(1*H*)-on-5-yl	CF_2
2-(trifluoromethyl)-[1,2,4]triazolo[1,5-*a*]pyrazin-5-yl	CF_2
[1,2,4]triazolo[1,5-*a*]pyrazin-5-yl	CF_2
1-methylpiperidin-2-on-5-yl	CF_2
1-methylpyrimidin-2(1*H*)-on-5-yl	(*S*)-CHF

16. The compound of Claim 14 of the structural formula selected from the group consisting of:



R^4	X
Br	CHF
4-F-Ph	CHF
1-methylpyridin-2(1*H*)-on-5-yl	CHF
[1,2,4]triazolo[4,3-*a*]pyridin-6-yl	CHF
[1,2,4]triazolo[1,5-*a*]pyridin-6-yl	CHF
[1,2,4]triazolo[1,5-*a*]pyrazin-5-yl	CHF
2-(trifluoromethyl)-[1,2,4]triazolo[1,5-*a*]pyrazin-5-yl	CHF
2-methyl-1,4-dihydro-isoquinolin-3(2*H*)-on-7-yl	CHF
1-methylpiperidin-2-on-5-yl	CHF
1-methylpyrimidin-2(1*H*)-on-5-yl	CHF

17. A pharmaceutical composition which comprises a compound of Claim 1 and a pharmaceutically acceptable carrier.

18. A method for inhibiting dipeptidyl peptidase-IV enzyme activity in a mammal in need thereof which comprises the administration to the mammal of an effective amount of a compound of Claim 1.

19. A method for treating diabetes in a mammal in need thereof which comprises the administration to the mammal of a therapeutically effective amount of a compound of Claim 1.

20. A method for treating non-insulin dependent (Type 2) diabetes in a mammal in need thereof which comprises the administration to the mammal of a therapeutically effective amount of a compound of Claim 1.

21. A method for treating hyperglycemia in a mammal in need thereof which comprises the administration to the mammal of a therapeutically effective amount of a compound of Claim 1.

22. A method for treating obesity in a mammal in need thereof which comprises the administration to the mammal of a therapeutically effective amount of a compound of Claim 1.

23. A method for treating one or more lipid disorders selected from the group of dyslipidemia, hyperlipidemia, hypertriglyceridemia, hypercholesterolemia, low HDL and high LDL in a mammal in need thereof which comprises the administration to the mammal of a therapeutically effective amount of a compound of Claim 1.

24. A method for treating in a mammal in need thereof one or more conditions selected from the group consisting of (1) hyperglycemia, (2) low glucose tolerance, (3) insulin resistance, (4) obesity, (5) lipid disorders, (6) dyslipidemia, (7) hyperlipidemia, (8) hypertriglyceridemia, (9) hypercholesterolemia, (10) low HDL levels, (11) high LDL levels, (12) atherosclerosis and its sequelae, (13) vascular restenosis, (14) irritable bowel syndrome, (15) inflammatory bowel disease, including Crohn's disease and ulcerative colitis, (16) other inflammatory conditions, (17) pancreatitis, (18) abdominal obesity, (19) neurodegenerative disease, (20) retinopathy, (21) nephropathy, (22) neuropathy, (23) Syndrome X, (24) ovarian hyperandrogenism (polycystic ovarian syndrome), and other disorders where insulin resistance is a component, wherein the method comprises the administration to the mammal a therapeutically effective amount of a compound of Claim 1.

25. The pharmaceutical composition of Claim 17 further comprising one or more additional active ingredients selected from the group consisting of:

(a) a second dipeptidyl peptidase IV inhibitor;

(b) an insulin sensitizer selected from the group consisting of a PPARγ agonist, a PPARα/γ dual agonist, a PPARα agonist, a biguanide, and a protein tyrosine phosphatase-1B inhibitor;

(c) an insulin or insulin mimetic;

(d) a sulfonylurea or other insulin secretagogue;

(e) an α-glucosidase inhibitor;

(f) a glucagon receptor antagonist;

(g) GLP-1, a GLP-1 mimetic, or a GLP-1 receptor agonist;

(h) GIP, a GIP mimetic, or a GIP receptor agonist;

(i) PACAP, a PACAP mimetic, or a PACAP receptor agonist;

(j) a cholesterol lowering agent such as (i) HMG-CoA reductase inhibitor, (ii) sequestrant, (iii) nicotinyl alcohol, nicotinic acid or a salt thereof, (iv) PPARα agonist, (v) PPARα/γ dual agonist, (vi) inhibitor of cholesterol absorption, (vii) acyl CoA:cholesterol acyltransferase inhibitor, and (viii) anti-oxidant;

(k) a PPARδ agonist;

(l) an antiobesity compound;

(m) an ileal bile acid transporter inhibitor;

(n) an anti-inflammatory agent;

(o) an antihypertensive agent; and

(p) an activator of glucokinase.

26. The pharmaceutical composition of Claim 25 wherein the PPARα/γ dual agonist is KRP-297.

27. A method of treating diabetes in a mammal in need thereof comprising administering to the mammal a therapeutically effective amount of a compound of Claim 1 in combination with the PPARα/γ dual agonist KRP-297.